

In the Claims:

Please amend claims 1, 5, 9, 13-16 and add new claims 17-32 as follows:

1. (Currently amended) A method of rescuing a mammal from a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby rescuing said mammal from a lethal dose of total body irradiation, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are primary cultured cells.

2. (Original) The method of claim 1, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

3. (Original) The method of claim 2, wherein said mammal is a human.

4. (Original) The method of claim 1, wherein said administration is infusion.

5. (Currently amended) A method of enhancing hematopoiesis in a mammal, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby enhancing hematopoiesis in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are primary cultured cells.

6. (Original) The method of claim 5, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

7. (Original) The method of claim 6, wherein said mammal is a human.

8. (Original) The method of claim 5, wherein said administration is infusion.

9. (Currently amended) A method of enhancing hematopoietic stem cell differentiation in a mammal given a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby enhancing hematopoietic stem cell differentiation in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are primary cultured cells.

10. (Original) The method of claim 9, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

11. (Original) The method of claim 10, wherein said mammal is a human.

12. (Original) The method of claim 9, wherein said administration is infusion.

13. (Currently amended) A method of enhancing the hematopoietic recovery in a mammal given a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby enhancing the hematopoietic recovery in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are primary cultured cells.

14. (Currently amended) A method of treating a mammal comprising an ablated marrow, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby treating said mammal comprising an ablated marrow, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are primary cultured cells.

15. (Currently amended) A method of enhancing hematopoiesis in a mammal comprising an ablated marrow, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby enhancing hematopoiesis in said mammal comprising an ablated marrow, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are primary cultured cells.

16. (Currently amended) A method of increasing survival of a mammal exposed to a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby increasing the survival of a mammal exposed to a lethal dose of total body irradiation, wherein said isolated marrow stromal cells are administered immediately upon isolation or following a period of *in vitro* culturing, wherein the cultured marrow stromal cells are primary cultured cells.

17. (New) A method of rescuing a mammal from a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby rescuing said mammal from a lethal dose of total body irradiation, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.

18. (New) The method of claim 1, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

19. (New) The method of claim 2, wherein said mammal is a human.

20. (New) The method of claim 1, wherein said administration is infusion.

21. (New) A method of enhancing hematopoiesis in a mammal, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby enhancing hematopoiesis in said mammal, wherein said isolated marrow

stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.

22. (New) The method of claim 5, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

23. (New) The method of claim 6, wherein said mammal is a human.

24. (New) The method of claim 5, wherein said administration is infusion.

25. (New) A method of enhancing hematopoietic stem cell differentiation in a mammal given a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby enhancing hematopoietic stem cell differentiation in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.

26. (New) The method of claim 9, wherein said mammal is selected from the group consisting of a rodent, a horse, a cow, a pig, a dog, a cat, a non-human primate, and a human.

27. (New) The method of claim 10, wherein said mammal is a human.

28. (New) The method of claim 9, wherein said administration is infusion.

29. (New) A method of enhancing the hematopoietic recovery in a mammal given a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby enhancing the hematopoietic recovery in said mammal, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more

than the third passage.

30. (New) A method of treating a mammal comprising an ablated marrow, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby treating said mammal comprising an ablated marrow, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing up for no more than the third passage.

31. (New) A method of enhancing hematopoiesis in a mammal comprising an ablated marrow, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to a mammal, thereby enhancing hematopoiesis in said mammal comprising an ablated marrow, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.

32. (New) A method of increasing survival of a mammal exposed to a lethal dose of total body irradiation, said method comprising administering isolated marrow stromal cells from an allogenic donor mammal to an irradiated mammal, thereby increasing the survival of a mammal exposed to a lethal dose of total body irradiation, wherein said isolated marrow stromal cells are administered immediately upon isolation or following *in vitro* culturing for no more than the third passage.